

Remarks/Arguments

Amendments

Claim 5 has been amended to depend on claim 4. It is submitted that no new matter is introduced by this amendment.

Allowed Subject Matter

The indication that claims 4, 6, 7, and 10 are allowed is acknowledged with thanks.

First Rejection under 35 USC 102(b)

Claims 1-3 were rejected under 35 USC 102(b) as anticipated by Burns, U.S. Patent 4,835,238 ("Burns"). This rejection is respectfully traversed.

Burns discloses the reaction of 1,1-dichlorosilacyclobutanes with nitrogen-containing difunctional nucleophiles to give polysilacyclobutasilazanes, which can be cross-linked and also converted to ceramic materials. Burns, Abstract. The Office acknowledges that this is not applicants' process. Office action, page 2, lines 13-14.

The Office asserts that the polymer of Burns is capable of functioning as a lithium-ion conductive solid polymer electrode. Office action, page 2, lines 10-12. This unsupported assertion is respectfully traversed. The Office has not made a record to support this assertion. *See, In re Lee*, 61 USPQ 1430, 1432-34 (Fed. Cir. 2002) (agency findings must be supported by the record).

Nothing in Burns discloses or suggests that the polymers are capable of functioning as lithium-ion conductive solid polymer electrodes. Initially, the polymers are viscous oils to soft, semi-solid materials. Burns, column 7, lines 9-11. The polymers undergo self crosslinking to form pre-ceramic polymers. Burns, column 7, line 21, to column 8, line 40. They can be fired to form ceramics. Burns, column 8, lines 51-66. Burns discloses nothing about the uptake and release of lithium ions by these polymers. Burns discloses nothing about the electrical conductivity of these polymers. Thus, the Office assertion is not supported by the record.

With respect to claims 2 and 3, the Office asserts that "once a rationale is provided tending to show that the claimed product appears to be the same as or obvious from a product

in the prior art, the claims is unpatentable even though the prior product was made by a different process." As discussed above, no rationale has been provided tending to show that the claimed product appears to be the same as or obvious from a product in the prior art. Therefore, the Office can not rely on *In re Thorpe* and/or on *In re Marosi* as this condition has not been satisfied.

Further, claim 2 recites a lithium bis(trimethylsilyl)amide as one of the reactants and claim 3 recites lithium bis(trimethylsilyl)amide as one of the reactants. Burns' products do not contain lithium. See, Burns, column 5, line 48, to column 8, line 20.

The Office has not made a record to support the assertion that the polymer of Burns is capable of functioning as a lithium-ion conductive solid polymer electrode. Further, the polymers of Burns do not contain lithium. The rejection of claims 1-3 as anticipated by Burns should be withdrawn.

Second Rejection under 35 USC 102(b)

Claims 2, 3, 5, 8, 9, and 11 were rejected under 35 USC 102(b) as anticipated by JP 9-263637. The Office acknowledges that the polymers disclosed in this reference are not produced by applicants' process. Office action, page 3, lines 7-9.

Claim 5 has been amended to depend on allowed claim 4. It is submitted that claim 5, and claims 8, 9, and 11, which are directly or indirectly dependent on claim 5, are allowable as claims dependent on an allowed claim.

With respect to claims 2 and 3, this rejection is respectfully traversed. JP 9-263637 teaches a functional polymer having a structure expressed by the formula $\{X-N(Y)-\}_n$ in which X is CO-CFZ-SO₂ or SO₂-CFZ-CO; Z is F or CH₃; Y is a metal such as lithium; and n is a positive integer greater than or equal to 2. JP 9-263637, Abstract. Although the Office does not expressly say so, the Office appears to be asserting that this product is the same as that produced by applicants' process. See, Office action, page 3, lines 7-13. If this rejection is maintained, the Office is respectfully requested to clarify the record with respect to this point in the next communication.

The polymer disclosed in JP 9-263637 does not have a Si—N—Si bond. The product produced in applicants' process has a Si—N—Si bond. See, specification, page 3, lines 23-31.

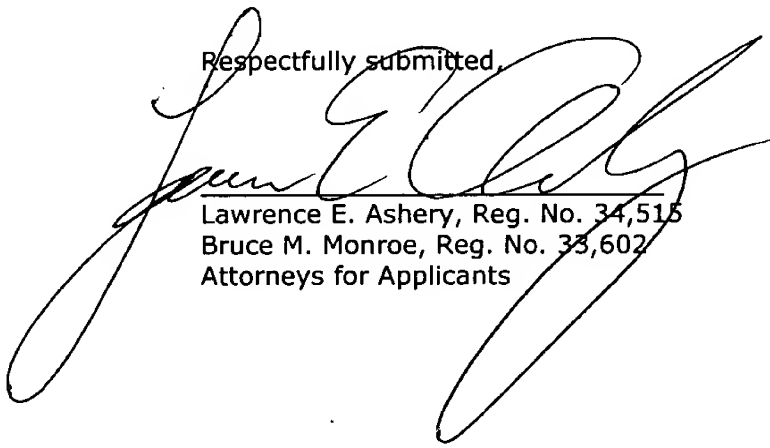
As noted in this passage, the "functional group having a silylamide bond, which is a counter anion of a lithium ion, is incorporated in a skeletal polymer chain. . . ." (emphasis added). As shown in paragraph [0024] and [Formula 5] of JP 9-263637, although $\text{LiN}(\text{SiMe}_3)_2$ is used in the reaction, it is not incorporated into the polymer chain. The resulting product, $\{\text{X-N}(\text{Li})\}_n$ -, in which X and n are as defined above, does not have a Si—N—Si bond. The nitrogen is bonded to carbon and/or sulfur.

For this reason, the product produced by applicants' process and the polymer disclosed by JP 9-263637 are not the same. Therefore, the rejection of claims 2 and 3 as anticipated by JP 9-263637 should be withdrawn.

Conclusion

It is respectfully submitted that the claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicants' attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

Respectfully submitted,


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The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

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February 5, 2004
